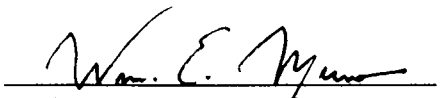
FIVE YEAR REVIEW REPORT

WHEELER PIT SITE
LA PRAIRIE TOWNSHIP, WISCONSIN

Pursuant to CERCLA

Prepared by:
U.S. Environmental Protection Agency
Region 5
Chicago, Illinois



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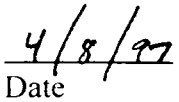

Date

I. INTRODUCTION

A. Authority and Purpose

Section 121 (c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by SARA and Section 300.430(f) (4) (ii) of the National Contingency Plan (NCP), require that periodic (no less often than five years) reviews are to be conducted for sites where hazardous substances, pollutants or contaminants remain at the site above levels that will not allow for unlimited use or unrestricted exposure following the completion of remedial actions for the site. The purpose of a statutory five-year review is to evaluate whether the remedial action remains protective of human health and the environment. This review focuses on the protectiveness of the Wheeler Pit Superfund Site, located in La Prairie Township, Wisconsin. This review will be placed in the Site files and local repository for the Wheeler Pit Superfund Site (the Site) in La Prairie Township, Wisconsin.

The United States Environmental Protection Agency (U.S. EPA) has established a three-tier (with a sub-tier for Tier I, as Ia) approach to conducting Five-Year Reviews, the most basic of which provides a minimum protectiveness evaluation for sites with on-going response actions at the site (Level Ia review). U.S. EPA contemplates that a Level I review will be appropriate in all but relatively few cases where site-specific considerations suggest otherwise. The second and third levels (Level II and Level III) of review are intended to provide the flexibility to respond to varying site-specific considerations, employing further analysis. Site specific considerations, including the nature of the response action, the status of the on-site response activities, and the proximity to populated areas and sensitive environmental areas determine the level of review for a given site. The Type Ia review conducted for this site is applicable to a site at which response is ongoing.

B. Site History

The Site is located in rural La Prairie Township approximately 1-1/2 miles east of the City of Janesville, Wisconsin, population 51,000, directly northwest of the intersection of County Highway O (Old Delavan Road) and County Highway J. The Site is within a physical depression approximately 50 feet deep and spanning an area of approximately 35 acres, which previously operated as a sand and gravel pit by the Southeast Railway Company and the Chicago, Milwaukee, St. Paul, and Pacific Railroad Company (CMC). In 1956, General Motors Corporation (GM) leased a portion of the site from the railroad for waste disposal. The Site consists of 3.82 acres of land in the southeast portion of Wheeler Pit, of which 3.42 acres were used as a disposal area for industrial wastes for approximately 18 years. The area surrounding the site is mainly used for agriculture and for sand and gravel mining. There is a small asphalt plant on property owned by Frank Brothers, Inc., which is north of and adjacent to the property on which the site is located. The Site was placed on the National Priorities List on September 21, 1984.

A consent order to carry out a Remedial Investigation and Feasibility Study (RI/FS) was signed on December 1, 1987. The two Potential Responsible Parties GM and CMC assumed responsibility for the Site investigation. U.S. EPA approved the Work Plan for the RI/FS in 1988. In September 1989, it was decided to streamline the remainder of the RI/FS based on the straightforward nature of the Site. All groundwater alternatives were eliminated from the list based on the levels of contaminants detected in the groundwater and the limited extent of contamination. It was determined that remedial actions were needed to protect public health and the environment from exposure to the contaminated materials and eliminate or reduce migration of contaminants to the groundwater. The Final RI Report was submitted in March 1990 and the Final FS Report in July 1990. A Record of Decision (ROD) was signed for the Site on September 28, 1990.

The Remedial Design and Remedial Action for the Site were performed under a Unilateral Administrative Order (UAO) by the Responsible Parties GM and CMC. The effective date of the Order was May 13, 1991. U.S. EPA approved the Remedial Design/Remedial Action (RD/RA) Work Plan in October 1991 and the final Design Documents in May 1992.

II. DISCUSSION

A. Remedial Objectives

The remedial action goals of the ROD for the Site were to minimize risks to public health and the environment from direct contact with contaminated materials and to minimize the migration of contaminants to groundwater. The remedy selected to meet these objectives included:

- Construction of a final landfill cover system in substantial compliance with Wisconsin Administrative Code, Chapters NR 500 through NR 520 (1988).
- Consolidation of waste and soil from adjacent property onto original disposal area;
- Use of institutional controls on landfill property to limit land and groundwater use;
- Monitoring of groundwater to ensure effectiveness of the remedial action;
- Evaluating monitoring results to determine if additional action is necessary; and
- Monitoring private wells.

B. Remedial Action

Remedial Construction Activities

After finding the 100% design document acceptable, U.S. EPA gave notice to proceed with the Remedial Action in a letter dated May 21, 1992. A contract for remedial construction activities was awarded on April 30, 1992. On-site construction began June 8, 1992. Remedial construction included the following activities:

- Consolidation of approximately 36,400 cubic yards of material, including waste, from property adjacent to the CMC property, where the Site is located;
- Installation of a Wisconsin Administrative Code (WAC) NO 504 solid waste cap over the waste and consolidated material, which included 2 feet compacted clay, 1 foot gravel drainage layer with geotextile filter fabric, 1.5 feet soil for rooting zone, and 0.5 foot topsoil;
- Hydroseeding of the cap and installation of a fence around the Site after cap completion;
- Access road construction;
- Retention basin construction;
- Perimeter drainage swale construction;
- Site clearing, stump disposal, and existing access road abandonment;
- Installation and abandonment of groundwater monitoring wells and implementation of a long-term monitoring program.

The pre-final inspection took place on October 27, 1992. Since the only two outstanding items were completion of a 20-ft segment of fence and hanging of warning signs on the fence, no final inspection was necessary. Photo documentation that these two items were complete was received by EPA on November 23, 1992. A Construction Completion Report was submitted by PRPs on December 1992 and the Preliminary Close-Out Report was completed on December 29, 1992, by U.S. EPA.

Landfill Cover System Performance

The multi-layer cap constructed to enclose waste materials has been shown to be adequate in preventing migration of site contaminants.

Groundwater Monitoring Activities

Groundwater has been sampled and monitored by U.S. EPA and the PRPs since January of 1992. A Baseline Groundwater Assessment Report was completed in July 1992. The purpose of the baseline groundwater monitoring program was to measure the chemical concentrations of groundwater at and near the disposal area, and to establish baseline conditions for future monitoring following the construction of the final landfill cover system. The chemicals of concern specified in the SOW are: arsenic, chromium, iron, manganese, 1,4-dichlorobenzene; 1,3-dichlorobenzene and chlorobenzene. The cleanup standards for groundwater, specified in the

U. S. EPA Record of Decision and Statement of Work are the Wisconsin Department of Natural Resources (WDNR) Preventive Action Limits (PALs) established in Chapter NR 140 of the Wisconsin Administrative Code.

A Three-to-Four Year Groundwater Assessment Report was submitted in June of 1996. This report was an evaluation, based on groundwater and analysis data, of the length of time required to meet groundwater cleanup standards through natural attenuation. The data analysis in this assessment indicated that PALs have been achieved and maintained with the exception of manganese in two down gradient monitoring wells (MW03AR and MW07A). Analytical results from a limited number of collocated/split groundwater samples collected by U.S. EPA verify the data at several well locations presented in the Three-to-Four Year Groundwater Assessment Report. The manganese concentration in groundwater apparently is being controlled by sodium chloride releases not attributable to the Site. Therefore, it is difficult to predict if and when the manganese concentration will achieve PALs. Chromium has historically fluctuated marginally above and below the PAL. Organic chemicals are not a concern at the Site since none have been detected above PALs. Arsenic has not been detected since the baseline groundwater assessment and iron has not exceeded the PAL in any down gradient monitoring well since the baseline groundwater assessment.

Based on the evaluation of the Three-to Four Year Groundwater Assessment Report, an alternate sampling program was proposed for the remainder of the first five year operation and maintenance period. A reduction in wells sampled and parameters analyzed were approved by U.S. EPA in consultation with WDNR.

A Five Year Groundwater Assessment Report is due at the end of 1997. A proposed sampling and analysis program for the next twenty five (25) years will be proposed by Respondents in the Five-Year Groundwater Assessment Report.

Activities and Schedule for Site Completion

Long-term operation and maintenance of the cover and storm water controls and sampling of the monitoring wells are the responsibility of GM and CMC. Institutional controls prohibiting future development of the Site and installation of drinking water wells near the Site will be in place by the completion of remedial action at the site.

The Remedial Action will not be complete until the performance standards for groundwater, which are the Wisconsin Preventive Action Limits (PALs), as set forth in WAC NO 140, are achieved through natural attenuation and maintained. According to the RD/RA Scope of Work, the review and evaluation point for groundwater quality and performance standard attainment is five years after the completion of cap construction, which will be October 1997. Groundwater standards are expected to be met within this five year period, although the PRPs may propose an alternate time frame which is subject to EPA approval. There is also an option after five years of

monitoring to establish a Wisconsin Alternative Concentration Limit (WACL) for a particular contaminant, according to the conditions in the RD/RA Scope of Work.

III. RECOMMENDATIONS

I recommend that groundwater continue to be monitored at the Wheeler Pit Site and sampled as per the RD/RA Scope of Work and any modifications made to the Groundwater Monitoring Program, as well as continue on-going operation and maintenance of the landfill cap system.

IV. STATEMENT ON PROTECTIVENESS

I certify that the remedy selected for this site remains protective of human health and the environment.

V. NEXT FIVE-YEAR REVIEW

The next five-year review will be conducted by April 30, 2002, which is five years from the date of this review.